

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (Previously Presented) A knee joint prosthesis for replacing the articulating knee portion of a femur and a tibia, said knee joint prosthesis comprising:

a femoral component having a first femoral bearing surface and a second femoral bearing surface;

a tibial component having a tibial bearing surface;

a bearing member having a first bearing surface operable to articulate with said first femoral bearing surface, a second bearing surface operable to articulate with said second femoral bearing surface; and

a linkage mechanism movably attaching the femoral component to the tibial component, the linkage mechanism operable to control movement of said femoral component relative to said tibial component;

wherein said tibial component includes a tibial bone engaging surface monolithic with said tibial bearing surface;

wherein said bearing member includes a third bearing surface operable to articulate with said tibial bearing surface.

2. (Original) The knee joint prosthesis of claim 1 wherein said linkage mechanism is further comprised of a linkage having a first end coupled to said femoral component and a second end coupled to said tibial component to allow relative

translation of said femoral component in the anterior direction and relative rotation during extension of said knee joint and relative translation of said femoral component in the posterior direction and relative rotation during flexion of said knee joint.

3. Cancelled.

4. (Currently Amended) The knee joint of claim 3 1 wherein said bearing member is operable to translate in the anterior direction during extension of said knee joint and translate in the posterior direction during flexion of said knee joint.

5. (Original) The knee joint prosthesis of claim 4 wherein said second end of said linkage is connected proximal to a posterior side of said tibial component.

6. (Original) The knee joint prosthesis of claim 5 wherein said second end of said linkage is located between said first and said second femoral bearing surfaces.

7. (Original) The knee joint prosthesis of claim 6 wherein said first end of said linkage is rotatably coupled to the femoral component to allow rotation around an axis defined in the lateral and medial directions.

8. (Original) The knee joint prosthesis of claim 4 wherein said linkage is formed to be either flexible, resilient or rigid.

9. (Original) The knee joint prosthesis of claim 1 wherein said knee joint prosthesis includes a guide post extending from said tibial component, said guide post operable to control movement of said bearing member.

10. (Original) The knee joint prosthesis of claim 9 wherein said guide post is removable.

11. (Original) The knee joint prosthesis of claim 9 wherein removing said guide post changes the control of the movement of the bearing member.

12. (Original) The knee joint prosthesis of claim 1 where knee joint prosthesis is adapted to be used as either an anterior stabilized, a posterior stabilized or a fully constrained knee joint prosthesis.

13. (Previously Presented) A knee joint prosthesis for replacing the articulating knee portion of a femur and a tibia, said knee joint prosthesis comprising:

a femoral component having a first femoral bearing surface;

a tibial component having a tibial bearing surface;

a bearing member having a first bearing surface operable to articulate with said first femoral bearing surface; and

a linkage mechanism movably attaching the femoral component to the tibial component, the linkage mechanism operable to control movement of said femoral component relative to said tibial component;

wherein said bearing member is able to translate in at least three of an anterior direction, a posterior direction, a medial direction, a lateral direction, and a rotational direction.

14. (Original) The knee joint prosthesis of claim 13 wherein said linkage mechanism is further comprised of a linkage having a first end coupled to said femoral component and a second end coupled to said tibial component to allow relative translation of said femoral component in the anterior direction and relative rotation during extension of said knee joint and relative translation of said femoral component in the posterior direction and relative rotation during flexion of said knee joint.

15. (Original) The knee joint prosthesis of claim 13 wherein said bearing member includes a second bearing surface operable to articulate with said tibial bearing surface

16. (Original) The knee joint of claim 14 wherein said bearing member is operable to translate in the anterior direction during extension of said knee joint and translate in the posterior direction during flexion of said knee joint.

17. (Original) The knee joint prosthesis of claim 13 wherein said linkage mechanism includes a linkage having a first end connected proximal to the posterior of said tibial component.

18. (Original) The knee joint prosthesis of claim 17 wherein a second end of said linkage is rotatably coupled to the femoral component to allow rotation around an axis defined in the lateral and medial directions.

19. (Original) The knee joint prosthesis of claim 17 wherein said linkage is formed to be either flexible, resilient or rigid.

20. (Original) The knee joint prosthesis of claim 13 wherein said knee joint prosthesis includes a guide post extending from said tibial component, said guide post operable to control movement of said bearing member.

21. (Original) The knee joint prosthesis of claim 20 wherein said guide post is removable.

22. (Original) The knee joint prosthesis of claim 20 wherein removing said guide post changes the control of the movement of the bearing member.

23. (Previously Presented) A method of replacing the articulating knee portion of a femur and a tibia comprising:

resecting an end portion of the tibia;

resecting an end portion of the femur;

attaching a tibial prosthetic component corresponding to the resected end portion of the tibia, the tibial prosthetic component having a bearing surface;

attaching a femoral prosthetic component corresponding to the resected end portion of the femur, the femoral prosthetic component having a bearing surface;

installing a bearing member between the tibial prosthetic component and the femoral prosthetic component, the bearing member having a first surface operable to articulate with the femoral bearing surface and a second bearing surface operable to articulate with the tibial bearing surface; and

connecting the tibial prosthetic component to the femoral prosthetic component with a linkage, the linkage and the bearing member operable to allow the femoral prosthetic component to translate in the posterior direction and rotate during flexion of the joint and said bearing member to rotate relative to said tibial prosthetic component.

24. (Previously Presented) A method of replacing the articulating knee portion of a femur and a tibia comprising:

resecting an end portion of the tibia;

resecting an end portion of the femur;

attaching a tibial prosthetic component corresponding to the resected end portion of the tibia, the tibial prosthetic component having a bearing surface;

attaching a femoral prosthetic component corresponding to the resected end portion of the femur, the femoral prosthetic component having a bearing surface;

installing a bearing member between the tibial prosthetic component and the femoral prosthetic component, the bearing member having a first surface operable to articulate with the femoral bearing surface and a second bearing surface operable to articulate with the tibial bearing surface; and

connecting the tibial prosthetic component to the femoral prosthetic component with a linkage, the linkage operable to allow the femoral prosthetic component to translate in the posterior direction and rotate during flexion of the joint;

wherein connecting the tibial prosthetic component to the femoral prosthetic component with the linkage further includes the step of inserting a first end of the linkage into a guide located in the tibial prosthetic component, inserting the second end of the linkage into a guide located in the femoral prosthetic component, installing a first stop on the first end of the linkage to prevent the first end of the linkage from passing through the guide on the tibial prosthetic component and installing a second stop on the second end of the linkage to prevent the second end of the linkage from passing through the guide on the femoral prosthetic component.

25. (Previously Presented) A method of replacing the articulating knee portion of a femur and a tibia comprising:

resecting an end portion of the tibia;

resecting an end portion of the femur;

attaching a tibial prosthetic component corresponding to the resected end portion of the tibia, the tibial prosthetic component having a bearing surface;

attaching a femoral prosthetic component corresponding to the resected end portion of the femur, the femoral prosthetic component having a bearing surface;

installing a bearing member between the tibial prosthetic component and the femoral prosthetic component, the bearing member having a first surface operable to articulate with the femoral bearing surface and a second bearing surface operable to articulate with the tibial bearing surface; and

connecting the tibial prosthetic component to the femoral prosthetic component with a linkage, the linkage operable to allow the femoral prosthetic component to translate in the posterior direction and rotate during flexion of the joint;

wherein connecting the tibial prosthetic component to the femoral prosthetic component with the linkage further includes inserting the linkage into a captured slot in the tibial component, translating the linkage until a first end portion of the linkage engages the captured slot, connecting a second end portion of the linkage to the femoral prosthetic component.

26. (Previously Presented) The knee prosthesis of claim 1, wherein said linkage mechanism includes a first end and a second end;

said first end moveably affixed to a posterior side of said tibial component.

27. (Previously Presented) The knee prosthesis of claim 26, wherein said second end of said linkage mechanism is moveably affixed to posterior portion of said femoral component.

28. (Previously Presented) The knee joint prosthesis of claim 13, wherein said linkage mechanism includes a first end and a second end;

wherein said first end defines at least one of a ball or a socket of a ball and socket connection;

wherein said tibial component defines another of said ball or said socket of said ball and socket connection.

29. (Previously Presented) The knee prosthesis of claim 28, wherein said ball and socket connection allows at least two of a translational, a rotational, or a distraction movement of at least one of said femoral component, said tibial component or said bearing member relative to another of said femoral component, said tibial component or said bearing member.

30. (Previously Presented) The method of claim 23, wherein connecting the tibial prosthetic component to the femoral prosthetic component with a

linkage includes connecting at least one end of the linkage to a posterior portion of the tibial prosthetic.

31. (Previously Presented) The method of claim 30, wherein connecting the tibial prosthetic component to the femoral prosthetic component with a linkage includes connecting at least one end of the linkage to a posterior portion of the tibial prosthetic occurs before the tibial prosthetic component is attached to the tibia.

32. (New) A prosthesis assembly to replace an articulating portion of a femur and a tibia, comprising:

a femoral component having a femoral bearing surface, and defining an anterior area, a posterior area, and an intermediate area between the anterior area and the posterior area;

a tibial component having a tibial bearing surface and defining an anterior area and a posterior area;

a bearing member having a first bearing surface operable to articulate with said femoral bearing surface and a second bearing surface operable to articulate with said tibial bearing surface; and

a linkage mechanism movably interconnecting the intermediate area of said femoral component and the posterior area of said tibial component.

33. (New) The prosthesis of claim 32, wherein said linkage mechanism includes a member extending between a first end and a second end;

wherein said first end is associated with said tibial component and said second end is associated with said femoral component.

34. (New) The prosthesis of claim 33, wherein said first end of said member includes a ball portion;

wherein said tibial component defines a socket to engage said ball portion.

35. (New) The prosthesis of claim 33, wherein said second end of said member defines a bore;

wherein said femoral component includes a bar positionable in said bore.

36. (New) The prosthesis of claim 33, wherein said member is flexible.

37. (New) A method of replacing the articulating knee portion of a femur and a tibia comprising:

resecting an end portion of the tibia;

resecting an end portion of the femur;

attaching a tibial prosthetic component corresponding to the resected end portion of the tibia, the tibial prosthetic component having a bearing surface;

attaching a femoral prosthetic component corresponding to the resected end portion of the femur, the femoral prosthetic component having a bearing surface;

installing a bearing member between the tibial prosthetic component and the femoral prosthetic component;

allowing the bearing member, having a first surface operable to articulate with the femoral bearing surface and a second bearing surface operable to articulate with the tibial bearing surface, to articulate with both of the tibial prosthetic component and the femoral prosthetic component; and

connecting the tibial prosthetic component to the femoral prosthetic component with a linkage;

allowing the femoral prosthetic component to translate in the posterior direction and rotate during flexion relative to the tibial prosthetic component of the joint because of the linkage.

38. (New) The method of claim 37, wherein connecting the tibial prosthetic component to the femoral prosthetic component with the linkage includes:

inserting the linkage into a captured slot in the tibial component;

translating the linkage until a first end portion of the linkage engages the captured slot; and

connecting a second end portion of the linkage to the femoral prosthetic component.

39. (New) The method of claim 37, wherein connecting the tibial prosthetic component to the femoral prosthetic component with the linkage includes:

connecting a first end of the linkage to a posterior portion of the tibial prosthetic component; and

connecting a second end of the linkage to a interior portion of the femoral prosthetic component.